

Macoun

Verse-Pflicht des mündigen Schenklers mit Kette

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Aber ... warum?

„The dark side is a pathway to many abilities some consider to be unnatural“

Sheev Palpatine

Das alte Thema: Cross Platform

- „Write Once, Run Anywhere“
- Geringere Kosten
- Schnellere Entwicklung
- Keine Probleme



Anforderungen

- Performance
- Gestaltung des User Interface
- Unterstützung der Plattform

Lernkurve

- Neue IDEs
- Neue Sprachen
- Neue Toolchains
- Neue Patterns

Developer

- Rat der aktuellen Developer einholen
- Ohne Plattformexpertise geht es nicht
- Falsches Staffing ist ein Kernproblem

Kotlin



Kotlin ist auch eine Insel

- 2011 Projekt von JetBrains (AppCode)
- 2017 Kotlin v1.0
- 2017: First-Class Android Support
- 2019: Preferred Language for Android
- Objektorientiert
- Interoperabel zu Java



Kotlin

```
var day: Int = 6  
var weekday = "Sunday"
```

```
let session = 1  
let name = "below"
```

Swift

```
var day: Int = 6  
var weekday = "Sunday"
```

```
val session = 1  
val name = "below"
```

Swift

```
var languages = Array<String>()  
languages.append("Objective-C")  
languages.append("Swift")  
languages.append("Kotlin")
```

```
let names = ["Alice", "Bob"]
```

Kotlin

```
var languages = ArrayList<String>()  
languages.add("Objective-C")  
languages.add("Swift")  
languages.add("Kotlin")
```

```
val names = listOf("Alice", "Bob")
```

Swift

```
func greetings(name: String = "World") -> String {  
    return "Hello \(name)!"  
}
```

```
greetings()
```

Kotlin

```
fun greetings(name: String = "World"): String {  
    return "Hello ${name}!"  
}
```

```
greetings()
```

Swift

```
let power = { (a: Int) -> Int in  
    a * a  
}
```

```
var power = { $0 * $0 * $0 }
```

Kotlin

```
val double = { a:Int ->  
    a * 2  
}
```

```
var power: (Int) -> Int = { it * it }
```

```
power = { it * it * it }
```

Swift

```
var middleName: String? = "G."  
middleName = nil
```

```
let id: Int? = nil  
var userId = id ?? -1  
if (id != nil) {  
    userId = id!  
} else {  
    userId = -1  
}  
print(userId)
```

Kotlin

```
var middleName: String? = "G."  
middleName = null
```

```
var id: Int? = null  
val userId = id ?: -1  
if (id != null) {  
    userId = id as Int  
} else {  
    userId = -1  
}  
println(userId)
```

Swift

```
func confirm(code: Int?) -> Bool {  
    guard let code = code else  
    { return false }  
    // code jetzt sicher nicht nil  
}
```

Kotlin

```
fun confirm(code: Int?): Boolean {  
    val secret = code as? Int ?: return false  
    // Mach Sachen  
}
```

Kotlin

```
var a = 3
var b = 4

when (a) {
    1 -> print ("Ist 1")
    b -> print ("Ist $b")
    else -> {
        print ("Nichts davon")
    }
}
```


Swift

```
class ViewController: UIViewController {  
  
}
```

Kotlin

```
class MainActivity: AppCompatActivity() {  
  
}
```

Swift

```
class Person {  
    let name: String  
  
    init(name: String) {  
        self.name = name  
    }  
}  
  
let alex = Person(name: "Alex")
```

Kotlin

```
class Person constructor(_name: String) {  
    val name: String  
  
    init {  
        name = _name  
    }  
}  
  
val alex = Person("Alex")
```

Swift

```
extension Int {  
    func square() -> Int {  
        return self * self  
    }  
}
```

```
print(5.square())
```

Kotlin

```
fun Int.square(): Int {  
    return this * this  
}
```

```
println(5.square())
```

Kotlin Native



Kotlin Native

- Nicht mehr Java Virtual Machine
- Konan Compiler
- Frontend für llvm

Kotlin Multiplatform

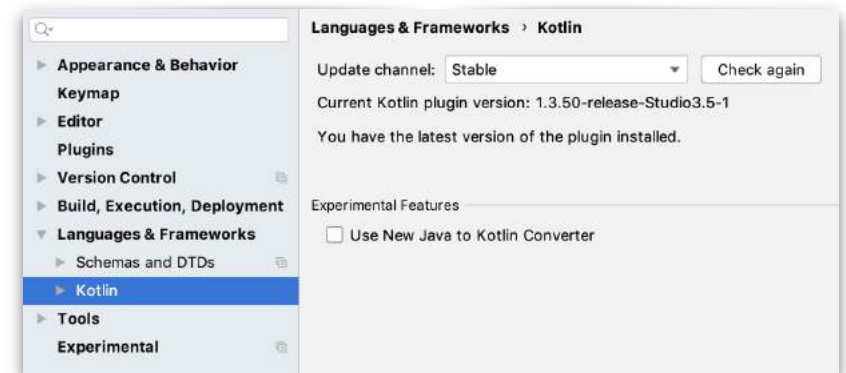


Kotlin Multiplatform

- Ab 2018
- Multiplatform projects are an **experimental** feature
- Kotlin 1.3.50 und neuer
- Nicht nur für iOS, auch für JavaScript 🤖

Was brauche ich?

- Xcode
- Android Studio, Kotlin 1.3.50
- Cocoapods
- Geheime Zutat ...



Erwartungen

- ✓ Geringe Lernkurve
- ✓ Plattformexpertise ist da
- ✓ Bekannte Toolchains
- ✓ Bekannte Patterns

Geheime Zutat...

<https://github.com/touchlab/xcode-kotlin>

Demo

Zusammenfassung

Und gibt's das auch in Echt?

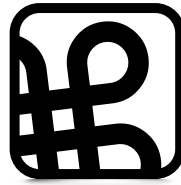
<https://github.com/touchlab/DroidconKotlin>

Ready for Production?

- Multiplatform projects are an **experimental** feature
- Noch keine Unterstützung von z.B. watchOS
- Aktuell kein Focus auf Performance
- Sehr gute Unterstützung durch die Community und JetBrains

Fragen?

Vielen Dank



Macoun